

5. (Newly Added) The method of claim 4, wherein said intermediate layer of silicon oxide is provided prior to said step of providing said SiN layer.

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6. (Newly Added) The method of claim 5, wherein said SiN layer is provided by means of chemical vapor deposition so that said ITO layer is protected during manufacture.

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#### REMARKS

Claims 1, 2 and 4 through 6 are pending in the present application. Claims 1 and 2 have been amended and claims 4 to 6 have been newly added.

The Action (1) rejected claim 1 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,330,042 to Kang et al. (hereafter "the Kang patent"), and (2) rejected claim 2 under 35 U.S.C. 103(a) as being unpatentable over the Kang patent in further view of U.S. Patent 6,466,686 to Senior (hereafter "the Senior patent"), U.S. Patent 6,327,376 to Harkin (hereafter "the Harkin patent"), U.S. Patent 6,285,319 to Fujiwara (hereafter "the Fujiwara patent"), and U.S. Patent 5,559,504 to Itsumi et al. (hereafter "the Itsumi patent").

Regarding item (1) identified above, it is respectfully submitted that present claim 1 is patentable over the Kang patent, and that present claim 1 defines an invention that is neither disclosed nor suggested by such reference.

It is respectfully submitted that the Kang patent not only fails to disclose or suggest "said ITO layer is deposited prior to the SiN layer" (emphasis added), but goes further to teach

away from such an arrangement.

The Kang patent reads on a liquid crystal display with a transparent glass substrate 101 formed into a metal layer; a gate electrode 111, a gate bus line 113, and a gate pad 115 formed by patterning the first metal layer 101; a gate insulating layer 117 (i.e., a silicon oxide ( $\text{SiO}_x$ ) or silicon nitride ( $\text{SiN}_x$ )) deposited on the gate electrode 111, the gate bus line 113, and the gate pad 115; a passivation layer 137 (i.e., a silicon oxide ( $\text{SiO}_x$ ) or silicon nitride ( $\text{SiN}_x$ )) deposited on the whole surface of the metal layer 101; and an indium tin oxide (ITO) that is deposited on the whole surface of the metal layer 101 such that a pixel electrode 141, a gate pad connector 157 and a source pad connector 167 can be formed by patterning the ITO layer. (col. 5, lines 21-67; and col. 6, lines 1-3).

Hence, it seems apparent, at least from the foregoing, that the ITO layer is deposited after layer 117 and/or layer 137 have been deposited and thus, it is respectfully submitted that the Kang patent does not disclose or suggest "said ITO layer is deposited prior to the SiN layer" and further, that the Kang patent teaches away from such an arrangement.

In addition, it is respectfully noted that the arrangement defined by present claim 1 is beneficial to protect the ITO layer during the deposition of nitride and to improve the optical and electrical properties of the ITO layer. Whereas the arrangement disclosed in the Kang patent does not necessarily accomplish this intended purpose.

Accordingly, reconsideration and withdrawal of the rejection, and allowance of claim 1, are respectfully requested.


Regarding item **(2)** identified above, it is respectfully submitted that present claim 2 is patentable over the cited reference combination (i.e., the Kang patent, the Senior patent, the Harkin patent, the Fujiwara patent, and the Itsumi patent), and that claim 1 defines an invention that is neither disclosed nor suggested by such reference combination.

In addition to failing to disclose or suggest, as noted in the Action, the use of a liquid crystal display as a fingerprint sensor, the Kang patent as noted above also fails to disclose or suggest an "ITO layer is deposited prior to the SiN layer". Thus, claim 2, which depends from claim 1, is patentable at least for the reason discussed above with respect to claim 1. Accordingly, reconsideration and withdrawal of the rejection, and allowance of claim 2, are respectfully requested.

With regard to newly added claims 4 to 6, it is respectfully submitted that such claims are patentable at least for the reasons discussed above with respect to claims 1 and 2. Accordingly, allowance of claims 4 to 6 is respectfully requested.

In sum, it is respectfully submitted that the present pending claims are clearly patentable over the cited reference. Thus, this application is in condition for allowance. Accordingly, reconsideration and withdrawal of all rejections of the claims are respectfully requested.

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A handwritten signature in black ink, appearing to read 'David L. Barnes', written over a horizontal line.

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE SPECIFICATION**

Please amend the specification as follows:

Page 1, line 1, insert:

--BACKGROUND OF THE INVENTION

1. Field of the Invention--

Page 1, line 6, insert:

--2. Description of the Related Art--

Page 2, line 3, insert:

--SUMMARY OF THE INVENTION--

Page 3, after line 2 and before line 3, insert:

--BRIEF DESCRIPTION OF THE DRAWINGS--

Page 3, line 16, insert:

--DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS--

**IN THE CLAIMS**

Please amend claims 1 and 2 as follows:

1. (Amended) An electro-optical device having an ITO (indium tin oxide) layer and a SiN layer near the ITO layer, [characterized in that] wherein said ITO layer is deposited prior to the SiN layer and an intermediate layer of silicon oxide is provided between the ITO layer and the SiN layer.

2. (Amended) [An] The electro-optical device [as claimed in] of claim 1, [characterized in that] wherein the electro-optical device is a fingerprint sensor.

Please add claims 4 to 6 as follows:

4. (Newly added) A method for improving the optical and electrical properties of an ITO layer and thereby the quality of an electro-optical device, comprising the steps of:

depositing an ITO layer; and

providing an intermediate layer of silicon oxide between said ITO layer and an SiN layer provided by means of chemical vapor deposition.

5. (Newly Added) The method of claim 4, wherein said intermediate layer of silicon oxide is provided prior to said step of providing said SiN layer.

6. (Newly Added) The method of claim 5, wherein said SiN layer is provided by means of chemical vapor deposition so that said ITO layer is protected during manufacture.